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Abortion Foes Keep Grip On NIH Research Policy

With the extension of an irrational ban started by the Reagan Administration, the crackpots have won again on the issue of research on fetal-tissue transplants.

The triumph extends an ideological rampage that has dismayed the medical-research establishment. It has also complicated the already difficult problem of recruiting for the government's senior posts in biomedical-research administration. And it invites wonder about the role of Louis W. Sullivan, the quiescent Secretary of Health and Human Services (HHS), who dutifully endorses policies he surely does not believe in.

Sullivan, who gained office only after a Faustian reversal of his prior support for abortion, got a free ride from the press and the biomedical establishment up till this outrageous episode, quite obviously because he's the only black in Bush's cabinet. But hostile editorials and commentaries on Capitol Hill suggest he may be running out of credit on the hackneyed contention that any alternative to Sullivan would be worse.

The transplant decision, announced after a deliberation for which the outcome was never in doubt, retains the prohibition against the use of federal funds for research involving fetal tissue from induced abortions. Never mind that transplants into diseased organs have produced promising indications and high hopes of beneficial effects against Parkinson's and several other diseases. Or that two advisory panels appointed by the National Institutes of Health concluded that the research should proceed.

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For abortion foes, who fill the upper ranks of the federal health bureaucracy in the Bush Administration, there's the far-fetched fear that hesitant women might be swayed toward abortion by the prospect of helping sick people. Or, even more preposterous, that money might lure them to pregnancy and abortion for pay. Therefore, the research is impermissible, because, as one of the pro-life stalwarts at HHS, Assistant Secretary of Health James O. Mason, put it, the extended ban is "a matter of heart and mind as well."

Sullivan initially tried to duck public notice for the ban by having Mason announce it, the explanation being that last year, Mason's predecessor in the Reagan Administration had announced the initial ban. That drew an angry response from one of the leading health-policy figures in the House, Rep. Henry Waxman (D-Calif.), Chairman of the Energy

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White House Science Office On Slow Road to Revival

New staff members have been coming on board at the White House Office of Science and Technology Policy (OSTP), which was reduced to a skeleton crew by the end of the Reagan Administration and virtually ignored in the startup months of the Bush Administration.

But Director D. Allan Bromley remains thwarted in filling the four Presidentially appointed Associate Director posts allotted to his office. Two nominees for these positions, James B. Wyngaarden, former Director of NIH, and J. Thomas Ratchford, Associate Executive Officer of the AAAS, underwent a friendly confirmation hearing October 27 before the Senate Committee on Commerce, Science, and Transportation, but over two weeks later, their nominations were still stuck in the Senate.

Nominees for the two other Associate Director positions have not yet been announced. Given the sluggishness of the

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In Brief

An increasingly expressed fear in Washington biomedical circles is that NIH's peer-review system is in de facto collapse, deluged by so many highly rated proposals that fewer than a third get funded. At that level, NIH officials concede, there are no quality differences between many of the winners and losers.

NIH reports that from fiscal 1988 to 1989, award rates fell from 35.3 percent to 29.3 percent, "the lowest level since these data were defined in FY 1970." It notes, too, that "Fewer than 5400 competing projects were funded in FY 1989, the lowest number since FY 1982, in spite of increasing numbers of applications reviewed and eligible for award."

The NIH budget has been growing in recent years at a respectable 6 to 8 percent but, as was noted in the latest annual report of the NIH Senate Appropriations Subcommittee, applicants are seeking and getting bigger grants. The villain, says the Subcommittee, "is the rapid escalation of requested salaries—up over 12 percent last year—which is the largest component of research project grants and represents almost 70 percent of the total on average." The Subcommittee is backing the Administration's proposal for a $120,000 cap on NIH funds for extramural salaries.

Meanwhile, the budget situation for federal agencies remains uncertain, as the fiscal year ticks on. If sequestration occurs—which indeed might happen, to meet Gramm-Rudman requirements—civilian agencies will have to cut spending by 5.3 percent, while Defense goes down by 4.3 percent.

. . . Senators Seething at Bush on Science Policy

More to Come, But for Now—

Who's Who at OSTP

Who's on the staff of the White House Office of Science and Technology Policy (OSTP) and where did they come from? After repeated requests over two weeks by SGR for a staff roster and biographies, OSTP delivered a list of names and background information on a few on November 13, from which the following was compiled, with some supplemental information.

D. Allan Bromley, Director and Assistant to the President for Science and Technology; Professor of Physics, on leave from Yale University

Damar W. Hawkins, Executive Assistant

Judith L. Bostock, Special Assistant to the Science Adviser; formerly with the Office of Management and Budget, Energy and Science Division

Robert L. Post Jr., Assistant to the Director

Sarah G. Keegan, Director of Public Affairs; on leave from NASA's Office of Communications

J. Thomas Ratchford, Associate Director for Policy and International Affairs (awaiting Senate confirmation); currently Associate Executive Officer, American Association for the Advancement of Science

James B. Wyngaarden, Associate Director for Life Science (awaiting Senate confirmation); former Director, National Institutes of Health

Nancy G. Maynard, Assistant Director for the Environment; formerly Associate Chief for Research, Laboratory for Oceans, NASA Goddard Space Flight Center

Michelle K. Van Cleave, Assistant Director for National Security Affairs; formerly, since March 1989, Republican Counsel to the House Committee on Science, Space, and Technology; from 1981-87, Assistant for Defense and Foreign Policy to Rep. Jack Kemp (R-NY)

Lt. Col. John F. O'Neil, Senior Policy Analyst for National Security Affairs

Rachel Levinson, Senior Policy Analyst for Biotechnology

Sara R. Bowden, Policy Analyst for Policy and International Affairs; with OSTP since August 1988; previously Executive Assistant to the Deputy Undersecretary of the International Trade Administration, Commerce Department

Lamont Eltinge and Ronald York; fellows of the Society for Automotive Engineers

Mary Harley Kruter; Education Fellow; Director, Thomas Jefferson High School for Science and Technology, Northern Va.

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federal appointment and clearance process, there's no certainty about when they will be named and finally confirmed.

As of November 14, the Senate Committee hadn't met to vote on the Wyngaarden and Ratchford nominations. A staff source there told SGR that with budget turmoil raging in Congress, Chairman Ernest Hollings (D-SC) would find it difficult to convene the Committee. With Congress hoping to recess from Thanksgiving to January 20, the nominations might be carried over to the next session.

Meanwhile, Ratchford is working for OSTP about one day a week in a consulting status while retaining his AAAS post. Wyngaarden has also been designated a consultant to OSTP. While his nomination remains pending in the Senate, he's been drawing some right-to-life fire for a pro-choice stance that he took when he was appointed to head NIH in 1982. That's not expected to endanger his confirmation for the OSTP post, but the situation is not wholly risk free.

Lurking behind these Senatorial scheduling difficulties is seething resentment toward the Administration's footdragging on global change and other issues of concern to the Committee (SGR November 1: "A Bad Day on Capitol Hill for Dr. D. Allan Bromley"). Ironically, Chairman Hollings was among those who urged Bush to assign a high priority to an early resurrection of OSTP, which had dwindled to insignificance in the last two years of Reagan's presidency. As a candidate, Bush told science audiences just what they wanted to hear about the high importance he assigned to presidential science advice.

But Bromley's nomination wasn't announced until April and, with one delay and another, he didn't take office until August. For White House watchers, the message of all this dawdling was simply that science advice and the office that's supposed to provide it do not rank high with the President or his inner circle. A test of this thesis will be provided by next month's Mediterranean summit, to which Bush will be taking an entourage of merely 20 or so senior staff members. No word yet on which ones, but it has been noted in Washington science-policy circles that Gorbachev usually takes a scientist or two on his travels.

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Editor and Publisher
Daniel S. Greenberg

Associate Publisher
Wanda J. Reif

European Correspondent
Francois Seguier (Paris)

Circulation Manager
Glen D. Grant

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Science Policy in Exile? Carnegie Studies Go On

Bearing the earmarks of a government of science in exile, the Carnegie Commission on Science, Technology and Government is undertaking a new series of basic policy studies that have few counterparts within the limp science-policy apparatus of the Bush Administration.

The 22-membership Commission, a well-funded offshoot of the philanthropic Carnegie Corporation of New York, made its debut in 1988 with *Science & Technology and the President*, an election-season report whose boosterism for strong and promptly installed presidential science advice went unheeded by the Bush Administration.

Officially non-partisan, the Commission includes several elder statesmen of science with Republican stripes, but they are of the moderate kind, such as H. Guyford Stever, a former NSF Director who served as Gerald Ford's Science Adviser. The predominant political flavor is government activist in the Democratic tradition. The relatively good financial fortune of science under Reagan and now under Bush is not discounted by the Democratic mandarins. But they are fearful of the tightening Gramm-Rudman vise and the failure of the political system to accept their belief that science and technology amply repay generous government support. Furthermore, they note that a lot of the budgetary growth of recent years, particularly for the National Institutes of Health, was produced by Democratic Congresses in defiance of the Reagan Administration.

The Co-Chairman of the Commission is William T. Golden, who advised Harry Truman on the organization of presidential science advice. Golden, a Wall Street investment banker who serves as President of the New York Academy of Sciences, shares the chairmanship with Joshua Lederberg, retiring President of Rockefeller University. The Commission's Executive Director, David Z. Robinson, served six years in the White House science office under Kennedy and Johnson.

Another member is NYU President John Brademas, former House Democratic Majority Whip. And then there's former MIT President Jerome B. Wiesner, a Kennedy-Johnson era White House Science Adviser who last year testified in Congress that the *Challenger* shuttle catastrophe might have been averted by better science advice in the Reagan White House. Also on the Commission is Lewis M. Branscomb, formerly of IBM, now a Harvard science-policy professor, who was often mentioned as a leading candidate for White House science adviser in a Dukakis Administration.

Founded with a six-month startup budget of $500,000, and now running on $1.5 million a year, the Commission is the personal creation of Carnegie President David Hamburg, a psychiatrist and former President of the Institute of Medicine, part of the National Academy of Sciences.

In progress at the Commission or soon to be are five major studies: Science and Technology in the Judicial and Regulatory Process, chaired by Helene Kaplan, a New York attorney; S&T and Economic Performance, chaired by Bobby Inman, the former Admiral and national-security intelligence chief who is now head of Westmark Systems, an Austin, Texas, electronics firm; S&T and Congress, chaired by NYU's Brademas; The Role of Non-Governmental Organizations (the National Academy of Sciences, American Association for the Advancement of Science, Natural

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Abortion Foes

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and Commerce Subcommittee on Health, which has jurisdiction over NIH. "By doing nothing at all, Dr. Sullivan is trying to offend no one," Waxman said. "But he has offended everyone with his hesitancy and lack of dedication."

Sullivan then came forth with the announcement that he had extended the ban indefinitely because fetal transplants "will increase the incidence of abortion." He did not attempt to explain the mechanism of this improbable outcome.

The ban demonstrates anew the grip of the anti-abortion movement on HHS, where Sullivan has been surrounded by true believers of the right-to-life movement. Prior to his confirmation, Sullivan, a physician who came to Washington from the Presidency of the Morehouse School of Medicine, had candidly but naively said that he favored a woman's right to choose whether to have an abortion. The right-to-life mafia instantly put a hold on his appointment, with the acquiescence, of course, of George Bush, until Sullivan recanted—which he ignominiously did at once. As positions around the newly installed Secretary were filled, it became apparent that a right-to-life credo was the *sine qua non* for senior posts at HHS. For those who want to work there, the uniform of the day is an ideological straitjacket.

However, a lot of able candidates don't care for the so-called litmus test, among them several whom the Administration has approached for the directorship of NIH, vacant since August. Sullivan subsequently said that the abortion issue would no longer enter into consideration for appointments for senior scientific posts in the Department. But given the ferocity of pro-life faith around him, the assurance means little.

More likely to crimp the nut movement at the top of HHS is the White House's realization that the anti-abortion movement doesn't play well in the election booth, as was demonstrated in last week's voting. For George Bush, the quintessential finger-to-the-wind President, that's persuasive, and there are reports that his favorite Svengali, Lee Atwater, is already sketching out strategy for backing away from the abortion issue.

In such matters, policy steers by the quest for votes.—DSG

France: The Scientists Are Happy, for a Change

Paris. A rare contentment has settled over the scientific community here. The researchers are calm and uncomplaining, in contrast to their many fellow countrymen, in and out of government service, who are on strike and demonstrating through the streets of Paris.

The mildly leftist government that President Mitterrand put into place last year thinks of itself as progressive, enlightened, and attuned to the needs and powers of science. It proclaims that attainment of its economic goals is dependent on accomplishments in science and technology. It strives to do many things to satisfy the scientists, presumably so they can advance knowledge and thereby assist the economy. Viewing the scientists as personally sensitive and politically volatile when confronted by non-scientific intruders, the government is very careful not to disturb their comfortable, habitual—some would say antiquated—ways of carrying on scientific business.

To advertise that opposition to change is official as well as personal policy, M. Mitterrand recently visited the *Centre National de la Recherche Scientifique*(CNRS), centerpiece of the French research enterprise, on the occasion of its 50th anniversary. The historians say he is the first President to cross the CNRS doorstep. The birthday celebration was attended by major figures in research and science administration from around the world, among them the Director of the US National Science Foundation, Erich Bloch, and the President of the US National Academy of Sciences, Frank Press, who was awarded the Legion of Honor by President Mitterrand. The ceremonies were on a grand scale.

With 1300 laboratories, 26,000 employes, and an annual budget of $1.5 billion, the CNRS is the most important component of French research. Organized around government-owned research facilities staffed by government employes, it somewhat resembles the laboratory system of the US Department of Energy. But the CNRS scientific mandate extends to all disciplines, including the social sciences, and thus, in intellectual scope, it is a close kin of the NSF.

Created on the eve of World War II, it was intended to conduct applied research for which the universities did not have the means or desire. Very rapidly, however, CNRS became a rigidly operated agency for basic research, clearly separate from the university sector. It rapidly became so inflexible that the conduct of public-sector applied research (e.g., in space, nuclear energy, agriculture, and medicine) was more and more confined to specialized agencies.

By taking this path, CNRS became a symbol of the rigidities that afflict science in this country. According to Michel Crozier, the best known and most respected sociologist of French organizational life, "CNRS has been invaded by the bureaucracy, it is burdened with administration. . . . CNRS research," Crozier continues, "is characterized by solid partitioning between institutions and even between researchers themselves. . . . The researchers in the labs are isolated."

Crozier was merely publishing in the press what has been widely whispered about CNRS for a long time. And, making his observations from a good vantage point—CNRS—where he is employed as a researcher, he also brought up a subject that is taboo in the politically leftist world of government research. Charging that "the influence of the unions has played an inordinate blocking role," Crozier added that "Bureaucracy plus unions, together they have crushed initiative. Leaders are hardly tolerated." However, the theme of rejuvenation was discreetly muted at the 50th anniversary ceremonies.

Impulses toward *perestroika* for CNRS are usually cut short by the Minister of Research and Technology, Hubert Curien, Director General of CNRS from 1969-73 and later the occupant of various other senior government posts in the R&D area. Curien declared that "CNRS's unity must be preserved," and he expressed confidence that because of its broad array of disciplines, CNRS is well connected with the various sectors of the economy that make use of science.

The truth is that in this 50th anniversary year, and given the fact that he is a prudent Minister and experienced politician of science, Curien did not want his name linked to a demolition job.

Thus, the status quo. Basic research is mired in opposition to change. It is, however, a very comfortable style of opposition. Research, along with teaching, holds a high priority in government spending plans. With a 7 percent increase over 1989, the civilian R&D budget will rise to $7.5 billion. That still leaves a long way to go to catch up with the US, Japan, and West Germany in the share of gross national product devoted to R&D. But after suffering a setback in a budget adopted last year while the right was in power under his Presidency, Mitterrand has accelerated the pace of spending. Thus, things are going well for CNRS, which explains why the directors of this agency are not agitating for reform.

Meanwhile, applied research has become the center of attention. Traditionally, the French are fond of big

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Carnegie Commission

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Resources Defense Council, etc.), co-chaired by William Carey, former Executive Officer of the AAAS, and former Senator Charles McC. Mathias (R-Md.), and Climate and Energy, chaired by H. Guyford Stever.

The reports that emanate from studies of this kind are rarely read by anyone, and usually disappear without a ripple, unless a hungry reporter can be enticed to a story by an exclusive leaked copy. However, the meetings that go into producing the reports are breeding grounds for alliances that can be influential—when the political atmosphere is friendly.—DSG

. . . Military's 40% Share of R&D Draws Criticism

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programs—space, nuclear power, very high-speed trains. But the increase in budgets for the big programs is running out of steam. They still account for 36 percent of the government's civilian R&D spending, but the amounts have increased by only 5.6 percent in the new budget. The biggest loser was the Atomic Energy Commission, which presides over a nuclear-power industry whose capacity far exceeds the nation's needs.

Military research, which takes some 40 percent of the government's R&D budget, is also facing reductions. In France, as in the US, where the military share stands at 65 percent of federal R&D spending, economic needs are creating pressure for change. Criticism of military dominance in R&D spending is prominent in the 10th annual five-year plan on science and technology, one of a series of sectorial plans commissioned by the government. The R&D task force, presided over by Yves Farge, the Scientific Director of the Pechiney aluminum firm, criticized the management of military research for "the partitioning of industries, the tendency to develop one's own technologies." To the surprise of many, the military establishment said it would study the problem. The response may have been merely a diversionary tactic, but the issue of the military's effect on civilian research has never before been officially acknowledged in France.

The general tone of the 10th Plan was strongly inspired by the weakness of French technological research. For Yves Farge, the "essential priority" for the first half of the 1990s is the development of technological research, though it must be kept in mind that these Plans are merely recommendations and have no effective authority. Nonetheless, they can be influential when they point in a direction toward which the government and industry are already leaning.

Since such is the case at present, it is worth noting that the Plan calls for increasing government support for R&D in small firms by $200 million over five years. In addition, it recommends incentives, including tax credits for research, to increase industrial R&D by 1 percent per year to reach a level of 1.5 percent of GNP by 1995. The Farge task force said that major assistance should be given to "low- and middle-level technology" sectors—i.e., activities outside the traditional big-program areas. Finally, the Plan recommended a doubling of the number of research engineers over the next 15 years.

The manpower recommendations are not disputed by experts on such matters. But there's little optimism about the numbers being achieved. The French system of education is rigidly self-limiting. The selection of science students is so rigorous that there is a *de facto* closed number for enrollments. French companies therefore recruit all over Europe and the most dynamic of them are reaching out to American universities—in a reverse brain drain.

In these circumstances, it would seem fitting for CNRS to serve as a breeding ground for scientists and engineers whose talents could serve the industrial sector. But CNRS, even with salaries far below those of industry, remains a very comfortable, secure place for its employes, and few are inclined to leave this pleasant situation.

The government talks bravely about mobilizing science and engineering for increasingly intense economic competition in world markets. But it has done nothing that might disturb CNRS.—FS

First Inspector General Cites A Few Problem Areas at NSF

SGR has obtained an advance copy of the first semi-annual report of the newly established Office of the Inspector General (IG) at the National Science Foundation. The *shamus* in residence, IG Linda G. Sundro, provides no alarming revelations, but there are several intriguing items included in the document.

"Although we did not employ any investigators during this reporting period," the report states, "our inquiries into allegations of scientific misconduct, criminal wrongdoing, and other employee and grantee violations resulted in the voluntary censure of one scientist and the recovery of funds and resignation of an NSF employe."

SGR's request for names and details, made on the brink of deadline for this issue, brought the response that such requests must be made in writing. A request is on the way.

The report also contains a puzzling list of some 85 organizations audited by the IG, under columns headed "Dollar Value of Questioned Costs," "Dollar Value of Unsupported Costs," and "Dollar Value of Recommendations that Funds Be Put to Better Use."

There are no entries at all in the third column, while the first and second columns are peppered with many $0.00s. All in all, the IG reported $1.4 million in "questioned costs" and $599,000 in "unsupported costs." Among the larger entries: the Center for Advanced Study in the Behavioral Sciences, $667,939 in questioned costs and $354,428 in unsupported costs; the LA County Museum of Natural History, $262,315 in questioned costs and $69,689 in unsupported costs, and the American Type Culture Collection, $112,211 in questioned costs and $51,353 in unsupported costs.

Sundro told SGR in a telephone interview that the rules of the IG system, as mandated by Congress, call for her office to report its findings to the NSF management, which is then responsible for determining what to do.

Established only last May (SGR October 1: "NSF's First Inspector General Setting up Shop"), the IG is putting together a staff to conduct audits that are now farmed out to private contractors. The first report reflects the startup status of the office. More can be expected in the later ones.

Genome Project to Spend 3% on Ethics Studies

The human-genome steamroller now mobilizing at the National Institutes of Health will produce an unexpected bonus of about $1.8 million this fiscal year for studies of genome-related "ethical, legal, and social questions." That's noticeable money in the financially parched field of inquiries into the implications of biomedical research, but much more than that could be on the way.

At a Senate session clearly pleased to hear of the set-aside plan, James D. Watson, Director of the NIH Human Genome Project, said the ethical-legal-social studies would receive "at least 3 percent" of the NIH genome budget, which is expected to wind up at about $60 million from the current turmoil on Capitol Hill.

The money will be committed for Fiscal 1990, which began on October 1. The Department of Energy, NIH's partner in the genome venture, is spending $27 million for its share this year, but has no plans for an NIH-style set-aside program. Over the next few years, genome funding from both agencies is expected to rise to an annual level of $200 million.

Watson, who divides his time between NIH and the Directorship of the Cold Spring Harbor Laboratory, plucked skillfully at the scientific responsibility theme in testifying November 9 before the Senate's leading handwringer on that subject, Albert Gore (D-Tenn.). Gore, Chairman of the Commerce Subcommittee on Science, Technology, and Space, employed the sound-bite style current in political discourse, and several times expressed concern that "our cleverness has outpaced our wisdom." He warmly praised Watson for the set-aside plan.

"The public must be included as active participants in the dialog" about genome research, the Senator declared, adding that "The Human Genome Initiative is a good example of the contrast between how well we are able to organize the scientific exploration of questions of science, and how difficult we find it to delve into ethical and societal concerns that are also raised."

In his testimony, Watson noted that "Most of these ethical questions are not new. We have faced questions regarding privacy, confidentiality and discrimination before with respect to diseases such as AIDS. Physicians and counselors frequently face such issues when treating patients with genetic diseases. However, with the quantity of new information that will emanate from the Human Genome Project, these questions will undoubtedly take on new urgency and become relevant to a larger sector of the population."

Watson said that a plan for ethical and related studies under the genome program is being devised by a group chaired by Nancy Wexler, a neurophysiologist at Columbia University, and that it would be released in early December. "I believe," Watson added, "that the benefits that come out of this tremendous research effort will far outweigh the real but avoidable risks. The key is using the knowledge gained from sequencing the genome in a responsible manner and ensuring that there are plenty of safeguards to prevent any abuses." Watson said that he soon expects to appoint a "person trained in bioethics" to run the program at NIH.

Though the genome program is an orchestrated partnership of NIH and the Department of Energy, DOE's Acting Associate Director for Health and Environmental Research, Robert W. Wood, told Gore that the Department has no plans at present to venture into the ethics field. Gore said he thought DOE should reconsider and Wood sweetly replied that he would take that message back to headquarters.

Regarding the organization of the genome project, Watson said, "We need to establish research centers where groups of 15-20 individuals from many disciplines can pool their talents." He noted previously announced plans to set up three centers in this fiscal year, with more to be added later on. The locations, he said, will be at "academic and industrial sites."

What also came out of the hearing was concern that the rapidly expanding genome project is angering hardpressed competitors for other kinds of NIH research money.

Maynard Olson, of the Washington University Department of Genetics, warned that the genome project is being unfairly blamed for what he described as "a significant crisis developing in the funding of biological research." The financial pressures, he insisted, do not arise from the expanding genome budget.

Rather, he said, "in response to spectacular progress in molecular genetics and cell biology, there has been unprecedented growth in the number of laboratories, the size of laboratories, and the cost of increasingly high-technology experimentation throughout the basic biomedical sciences. . . . Funding of the human-genome initiative must not come at the expense of sustaining the health of the basic biological sciences. On the other hand, our ability to take new initiatives when historic opportunities arise cannot be held hostage to the implementation of an ideal solution to the much broader problem of funding explosive growth in all areas of basic biology."

In Congress and in science, that assessment is widely shared. The difficulty, however, is that federal spending for science and everything else is hobbled by mandated deficit reductions and political evasion of the need to raise more money through taxes and other means.

Off on the horizon is the question of whether the minimum of a 3 percent cut for ethics and related studies will remain in force when the genome budget soars to far higher levels. Still in the planning stages, the new program hasn't raised notice in right-to-life circles, which look with suspicion on medical-ethics studies.

In fact, after several years of inconclusive wrangling about membership and advisory council appointments, Congress has given up on efforts to activate its own Biomedical Ethics Board.

More In Print: Tax-Exempts, Trash, Nuclear Tests

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produced by a task force of the ASEE Engineering Deans Council, with a focus on staffing the teaching ranks of the engineering schools. Included is a 12-page insert "message to our best and brightest," by Raymond B. Landis, Dean of Engineering and Technology, California State University, LA, discussing careers in academic engineering.

Order from: ASEE, 11 DuPont Circle NW, Suite 200, Washington, DC 20036; tel. 202/293-7080.

Disclosure of Information by Tax-Exempt Organizations (9 pp., $3), by the Independent Sector, a consortium of voluntary and non-profit organizations, a short guide to the little-known tax-code amendment, passed in 1987, that requires universities, professional societies, and other tax-exempt organizations to provide public access to their federal tax returns (Form 990)—including salaries of top officers and many budget details usually not included in published financial statements. The amendment, which applies to organizations holding tax-exemptions under Section 501 of the Internal Revenue Code, specifies that the Form 990s are to be made promptly available for inspection upon request to anyone seeking them. The law thus provides a window on the finances of a publicly subsidized sector that rarely receives critical scrutiny; this is especially the case with professional societies, which usually are characterized by over-committed boards, indifferent memberships, and permanent, self-governing bureaucracies.

Order from: The Independent Sector, 1828 L St. NW, Suite 1200, Washington, DC 20036; tel. 202/223-8100.

Facing America's Trash: What Next for Municipal Solid Waste? (GPO Stock No. 052-003-01168-9; 377 pp., $16), from the Congressional Office of Technology Assessment, says federal policy should be developed to assist with the mounting problems of municipal waste, and goes over a variety of options, ranging from "high-visibility awards" for industrial firms that minimize waste production to bans on especially troublesome materials. OTA vaporously concludes: "By implementing a policy that considers MSW (municipal solid waste) in the context of materials use, a policy based on the concepts of waste prevention and materials management, we have a chance to solve the problems associated with MSW."

Also from OTA: ***The Containment of Underground Nuclear Explosions*** (GPO Stock No. 052-003-01167-1, 80 pp., $4.25), says that public distrust of nuclear testing is intensified by the Department of Energy's policy of not announcing some of the dozen or more underground tests conducted annually at the Nevada Test Site. OTA says that the dangers of accidental release of radioactivity "have been made as remote as possible." The report, on a subject that's increasingly sensitive for the bomb-testing establishment, was produced at the request of Sen. Orrin G. Hatch (R-Utah) and the House Committee on Interior and Insular Affairs.

In preparation of the report, OTA held two workshops, one headed by Neville G. Cook, Professor of Material Science and Mineral Engineering, University of California, the other by Melvin W. Carter, Professor emeritus, Georgia Institute of Technology.

Order OTA publications from: US Government Printing Office, Superintendent of Documents, Washington, DC 20402; tel. 202/783-3238. Add 25 percent for international orders.

Job Changes, Appointments

John S. Toll, ousted last spring as Chancellor of the University of Maryland, has been appointed President of the Universities Research Association, Inc., the Washington-based consortium that manages the Fermilab and the development of the Superconducting Super Collider for the Department of Energy. He succeeds ***Edward Knapp***, a former NSF Director, who has returned to research at the Los Alamos National Laboratory.

David A. Sanchez, Vice President and Provost of Lehigh University, has been appointed Assistant Director for Mathematical and Physical Sciences at the National Science Foundation, succeeding ***Richard Nicholson***, who is Executive Officer of the American Association for the Advancement of Science.

Robert O. Hunter has resigned as Director of the Office of Energy Research at the Department of Energy, where he was a rare holdover from the Reagan Administration. A successor has not been named for the post, which is a Presidential appointment.

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In Print: R&D Distribution, Academic Science, Etc.

The publications listed are obtainable as indicated—not from SGR.

Geographic Patterns: R&D in the United States (NSF 89-317, 69 pp., no charge), inspired by the many state economic-development programs keyed to R&D, this report looks at R&D and related activities on a state-by-state and regional basis, summing up state, federal, and industrial financing. Included are state "profiles" detailing scientific and engineering manpower, academic research funds, degrees awarded, and support of R&D by industry and the major federal agencies. The report is a welcome addition to NSF's inventory of statistical studies, but the coverage extends only to 1985, a long time ago in these matters.

Order from: NSF, Division of Science Resources Studies, 1800 G St. NW, Washington, DC 20550; tel. 202/634-4634.

Science and Technology in the Academic Enterprise: Status, Trends, and Issues (100 pp., no charge), a "discussion paper" from the Government-University-Industry Research Roundtable, a creature of the National Academy of Sciences, rehashes academic S&T's many woes, ranging from tight federal budgets to rising costs, declining science enrollments and a forthcoming retirement surge—all coming together, the report notes, when the country is increasingly dependent on S&T and many fields are ripe for important developments. Prepared by a committee chaired by NSF Director Erich Bloch, the report is described as an opener for further work aimed at devising "options and alternative scenarios for sustaining the quality of academic research during the 1990s and into the next century." Pretty thin stuff, but the report does contain some 70 pages of nicely assembled statistics and charts on academic R&D finance, manpower, etc., tracked over several decades.

Order from: National Academy of Sciences, Government-University-Industry Research Roundtable, 2101 Constitution Ave. NW, Washington, DC 20418; tel. 202/334-3486.

New Perspectives on HIV-Related Illnesses: Progress in Health Services Research (215 pp., no charge), proceedings of a conference May 17-19, 1989, in Miami, Fla., cosponsored by the National Center for Health Services Research and Health Care Technology Assessment and the Health Care Financing Administration, on topics including trends in epidemiology, financing of care, social consequences of AIDS, and ethical issues.

Order from: NCHSR, Publications and Information Branch, Room 18-2, 5600 Fishers Lane, Rockville, Md. 20857; tel. 301/443-4100.

Appropriateness of Acute Medical Care for the Elderly: An Analysis of the Literature (R-3717, 58 pp., $7.50), by the RAND Corp., delves into the research literature on the politically volatile issue of the "appropriateness" of the hefty share of health-care spending devoted to the elderly, and concludes that the literature is skimpy and of "relatively low quality." But, from what could be found, RAND reports, many of the elderly receive excessive or unsuitable treatments, while many others are neglected. Among the supporters of the study was the American Association of Retired Persons, lately emerged as the most fearsome lobby on the Washington scene.

Order from: RAND Corp., Publications, 1700 Main St., PO Box 2138, Santa Monica, Calif. 90406-2138; (no telephone orders).

Keeping Options Alive: The Scientific Basis for Conserving Biodiversity (128 pp., $10) and ***A Survey of US-Based Efforts to Research and Conserve Biological Diversity in Developing Countries*** (71 pp., $10), from the World Resources Institute, a Washington-based policy-research organization, related publications examining declines in biodiversity and efforts to limit the losses.

Order from: WRI Publications, PO Box 4852, Hampden Station, Baltimore, Md. 21211; tel. 202/662-2537.

Engineering Faculty for the 1990s and Beyond (no charge), special issue of *Engineering Education*, journal of the American Society for Engineering Education (ASEE),

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